WORK INSTRUCTION

Title: Replacement of ICV/OCV Upper & Lower Main O-Rings, ICV Wiper O-Ring, OCA Fiber Gasket, and ICV Lid Debris Shield

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Approved for Use by: Michael R. Brown Effective Date: February 2006

Applicable Drawings:
1. 2077-500SNP (Sheets 1-11) - TRUPACT-II Packaging SARP Drawings
2. 707 SAR (Sheets 1-12) - HalfPACT Packaging SARP Drawings

SARP Requirements:
- Chapters 7.0 and 8.0
  - Containment boundary O-ring seals, wiper O-ring seal, and ICV lid debris shield shall be replaced annually and if unable to perform their intended functions.
  - Noncontainment boundary O-ring seals and handling O-rings shall be replaced if unable to perform their intended function.

Tools Required:
- Adhesive applicator (caulking gun)
- Stiff blade scraper
- Lead wire seal crimper
- Scissors

Spare Parts Required:
- The spare parts are identified in the Work Instruction steps. All spare parts listed are controlled and shall be recorded on the Maintenance Record.

Materials Required:
- Vacuum grease
- RTV silicone adhesive, Dow Corning 732 or equivalent
- Denatured alcohol or equivalent
- Lint-free rags
- Metal tags ("Leak Test Required") (PN 2077-02013)
- Lead wire seals (PN 2077-02012)

Safety Requirements:
- Safety will be observed in accordance with site requirements.

Prerequisite Conditions:
- The O-ring or gasket to be replaced has been removed and discarded.
- O-ring grooves have been cleaned, inspected, or repaired as necessary.

Instruction Steps:

- There is no requirement to replace components in sequence listed.
- The spare parts listed below shall be replaced with like-for-like components from the approved spare parts supply.
- The replacement of these parts shall be documented on a **Maintenance Record.**
- This instruction **is not required to be attached** to the Maintenance Record but may be used as a checklist during performance of maintenance.

☐ ICV wiper O-ring seal * . . . . . (PN 2077-180-27) PO#_____
☐ ICV lower main O-ring seal * . . . . . (PN 2077-180-19) PO#_____
☐ ICV upper main O-ring seal . . . . . (PN 2077-180-09) PO#_____
☐ OCV lower main O-ring seal * . . . . . (PN 2077-160-24) PO#_____
☐ OCV upper main O-ring seal . . . . . (PN 2077-160-15) PO#_____

1.0 Thoroughly clean the O-ring grooves using alcohol and lint-free rags.

Note: O-rings are considered clean when they are absent of free-standing vacuum grease, dirt, debris, and other foreign matter.

2.0 Verify O-ring(s) are clean.
3.0 Lightly coat the O-ring with vacuum grease. This step usually requires two people, with one person holding the O-ring above the floor and the other person drawing the O-ring through the palm of the hand until all surfaces of the O-ring are coated. One tablespoon of grease is sufficient to coat the O-ring.
4.0 Install the lubricated O-ring into the groove ensuring it is seated around the entire circumference of the groove.
5.0 If making a radioactive waste shipment, perform Preshipment (helium) Leakage Rate Test, and attach documentation to the Maintenance Record.
6.0 If making an empty shipment, wire/crimp a "Leak Test Required" tag to the vent port seal boss with the name of the replaced O-ring written in indelible ink on the reverse of the tag, and annotate on the Maintenance Record that the tag was attached.

* Note: A Maintenance Leakage Rate Test is not required for wiper O-ring and ICV/OCV lower main O-ring replacement.

☐ ICV debris shield . . . . . (PN 2077-180-25) PO#_____

Note: Sections of the debris shield may be replaced as needed.

1.0 Remove the debris shield being replaced and discard.
2.0 Thoroughly clean the ICV lid groove using alcohol and lint-free rags to remove tape and residue.
3.0 Prepare the replacement debris shield as follows:
- If debris shield has pre-applied adhesive, then go to Step 4.
- If debris shield does not have pre-applied adhesive, then prepare debris shield by installing double-sided tape (2077-180-26) to smooth side of debris shield.

4.0 Remove backing from adhesive.
5.0 Install debris shield in groove, trim as needed.
6.0 Ensure debris shield is seated around entire circumference of the lid groove.

☐ Ceramic fiber gasket . . . . . (PN 2077-160-27) PO#_____

Note: Sections of the ceramic fiber gasket may be removed/replaced as needed.
Note: If a section of the gasket is being replaced, then scissors shall be used to cut out the damaged section.
1.0 Remove the old gasket using a stiff blade scraper.
2.0 Thoroughly remove any adhesive residue using scraper, alcohol, and lint-free rags.
3.0 Trim gasket as needed.
4.0 Apply adhesive using the applicator, and spread to the full width and length of the replaced/repaired gasket material.
5.0 Bond the new gasket in place, ensuring gasket adhesion around entire circumference of upper and/or lower Z-flange, as applicable.
6.0 When using Permatex® brand Clear RTV Silicone Adhesive #66B, allow a minimum of six hours cure time prior to installation of locking Z-flange (WI-CH.07) or OCA lid. For all other adhesives, allow adhesive to cure in accordance with manufacturer's recommendations prior to reassembly.

Verification Requirements:

1.0 Spare parts used are listed on the Maintenance Record.
2.0 Helium leak test documentation is attached to the Maintenance Record
3.0 If the helium leak test has been deferred, a "Leak Test Required" tag is attached to the packaging and is annotated on the Maintenance Record.
4.0 Work performed is listed on the Maintenance Record.
5.0 Work Instruction is listed on the Maintenance Record.